

IN THE CLAIMS

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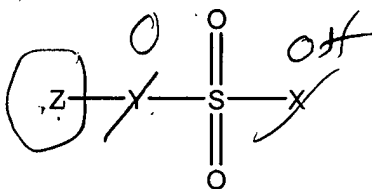
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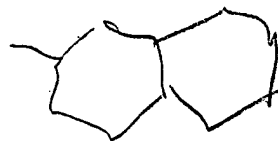
Please cancel claims 1-33, 35, 36, and 41-57 without prejudice.

Marked-up Claims

\* 34. (amended) A coating comprising an effective amount of an anti-fouling compound of [represented by general] structure 1:



1



wherein

X represents -OH, -O(aryl), -O(acyl), -O(sulfonyl), -CN, F, Cl, or Br;

Y represents O, S, Se, or NR;

Z represents [optionally] an unsubstituted or substituted moiety selected from the group consisting of branched alkyl, unbranched alkyl of 7 carbons or less, heteroalkyl, cycloalkyl, heterocycloalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, and -(CH<sub>2</sub>)<sub>m</sub>-R<sub>80</sub>; wherein when Z is a substituted aryl, any substituent on the aryl ring is selected from the group consisting of halo, azido, alkyl, aralkyl, alkynyl, cycloalkyl, hydroxyl, alkoxy, amino, nitro, sulfhydryl, imino, amido, silyl, alkylthio, sulfonyl, sulfonamido, acyl, formyl, alkoxycarbonyl, heterocyclyl, aryl, heteroaryl, trifluoromethyl, and cyano;

R represents independently for each occurrence hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or -(CH<sub>2</sub>)<sub>m</sub>-R<sub>80</sub>;

R<sub>80</sub> represents independently for each occurrence aryl, cycloalkyl, cycloalkenyl, heterocyclyl, or polycyclyl; and

m is an integer in the range 0 to 8 inclusive or salt thereof,

wherein the coating releases the compound or a biologically active fragment thereof when in contact with a surface that is amenable to biofouling.

37. (amended) A coating of claim 34, wherein Z represents [optionally] an unsubstituted or substituted branched alkyl, unbranched alkyl of 7 carbons or less, aryl, or  $-(CH_2)_m-R_{80}$ .

38. (amended) A coating of claim 34, wherein Z represents [optionally] an unsubstituted or substituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl.

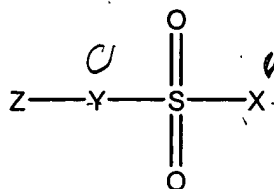
39. (amended) A coating of claim 34 wherein Z represents methyl, [octyl,] 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

Please add the following new claims:

78.

(new)

A coating comprising an effective amount of an anti-fouling compound of structure 1:



wherein

X represents -O(aryl)<sub>2</sub>, -O(acyl), -O(sulfonyl), -CN, F, Cl, or Br;

Y represents O, S, Se, or NR;

Z represents a substituted or unsubstituted alkyl, heteroalkyl, cycloalkyl, heterocycloalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or -(CH<sub>2</sub>)<sub>m</sub>-R<sub>80</sub> group;

R represents independently for each occurrence hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or -(CH<sub>2</sub>)<sub>m</sub>-R<sub>80</sub>;

R<sub>80</sub> represents independently for each occurrence aryl, cycloalkyl, cycloalkenyl, heterocyclyl, or polycyclyl; and

m is an integer in the range 0 to 8 inclusive or salt thereof,

wherein the coating releases the compound or a biologically active fragment thereof when in contact with a surface that is amenable to biofouling.

79. (new) A coating of claim 78, wherein X represents F, Cl, or Br.

80. (new) A coating of claim 78, wherein Y represents O.

81. **(new)** A coating of claim 78, wherein Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.
82. **(new)** A coating of claim 78, wherein Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.
83. **(new)** A coating of claim 78, wherein Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.
84. **(new)** A coating of claim 78 wherein X represents F, Cl, or Br; and Y represents O.
85. **(new)** A coating of claim 78, wherein X represents Cl; and Y represents O.
86. **(new)** A coating of claim 78, wherein X represents F, Cl, or Br; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.
87. **(new)** A coating of claim 78, wherein X represents Cl; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.
88. **(new)** A coating of claim 78, wherein X represents F, Cl, or Br; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.
89. **(new)** A coating of claim 78, wherein X represents Cl; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.

90. **(new)** A coating of claim 78, wherein X represents F, Cl, or Br; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.
91. **(new)** A coating of claim 78, wherein X represents Cl; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.
92. **(new)** A coating of claim 78, wherein Y represents O; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.
93. **(new)** A coating of claim 78, wherein Y represents O; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.
94. **(new)** A coating of claim 78, wherein Y represents O; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.
95. **(new)** A coating of claim 78, wherein X represents F, Cl, or Br; Y represents O; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.
96. **(new)** A coating of claim 78, wherein X represents Cl; Y represents O; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.

97. (new) A coating of claim 78, wherein X represents F, Cl, or Br; Y represents O; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.

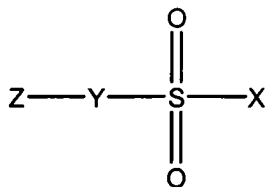
98. (new) A coating of claim 78, wherein X represents Cl; Y represents O; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.

99. (new) A coating of claim 78, wherein X represents F, Cl, or Br; Y represents O; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

100. (new) A coating of claim 78, wherein X represents Cl; Y represents O; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

101. (new) A coating of claim 78, which is a liquid and solidifies into a hard coating on a surface.

*new claim*  
102. (new) A coating comprising an effective amount of an anti-fouling compound of structure 1:



1

wherein

X represents O, -O(aryl), -O(acyl), -O(sulfonyl), -CN, F, Cl, or Br;

Y represents S, Se, or NR;

Z represents a substituted or unsubstituted alkyl, heteroalkyl, cycloalkyl, heterocycloalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or  $-(CH_2)_m-R_{80}$  group;

R represents independently for each occurrence hydrogen, alkyl, heteroalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, or  $-(CH_2)_m-R_{80}$ ;

$R_{80}$  represents independently for each occurrence aryl, cycloalkyl, cycloalkenyl, heterocyclyl, or polycyclyl; and

m is an integer in the range 0 to 8 inclusive or salt thereof,

wherein the coating releases the compound or a biologically active fragment thereof when in contact with a surface that is amenable to biofouling.

103. (new) A coating of claim 102, wherein X represents F, Cl, or Br.

104. (new) A coating of claim 102, wherein X represents Cl.

105. (new) A coating of claim 102, wherein Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.

106. (new) A coating of claim 102, wherein Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.

107. (new) A coating of claim 102, wherein Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

108. **(new)** A coating of claim 102, wherein X represents F, Cl, or Br; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.

109. **(new)** A coating of claim 102, wherein X represents Cl; and Z represents a substituted or unsubstituted alkyl, aryl, or  $-(CH_2)_m-R_{80}$  group.

110. **(new)** A coating of claim 102, wherein X represents F, Cl, or Br; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.

111. **(new)** A coating of claim 102, wherein X represents Cl; and Z represents a substituted or unsubstituted alkylphenyl, heteroalkylphenyl, arylphenyl, or heteroarylphenyl group.

112. **(new)** A coating of claim 102, wherein X represents F, Cl, or Br; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

113. **(new)** A coating of claim 102, wherein X represents Cl; and Z represents methyl, octyl, 4-(2-methylpropyl)phenyl, 4-(1,1-dimethylethyl)phenyl, 4-(1,1-dimethylpropyl)phenyl, 4-pentylphenyl, 4-(1-methyl-1-phenylethyl)phenyl, or 4-(1-methylheptyl)phenyl.

114. **(new)** A coating of claim 102, which is a liquid and solidifies into a hard coating on a surface.